NASA ADVISORY COUNCIL

HELIOPHYSICS SUBCOMMITTEE

January 9, 2015

Teleconference

MEETING MINUTES

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W. Jeffrey Hughes, Acting Chair

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Ramona L. Kessel, Executive Secretary

Table of Contents

Prepared by Elizabeth Sheley
Zantech IT

Friday, January 9, 2015

Welcome

Dr. Ramona Kessel, Executive Secretary of the NASA Advisory Committee (NAC) Heliophysics Subcommittee (HPS), opened the conference call by calling roll of Subcommittee attendees. She next introduced the topic of the teleconference, which was whether to combine the Guest Investigator (GI) and Supporting Research (SR) elements of the Research and Analysis (R&A) program for the next Research Opportunities in Space and Earth Sciences (ROSES) call.

ROSES 2015: Combine Supporting Research (SR) and Guest Investigator (GI) Programs

NASA's Heliophysics Division (HPD) is committed to increasing the R&A portion of Division funds, though that will not occur in Fiscal Year 2015 (FY15). Currently, the highest priority is given to use of data from NASA spacecraft in order to address the goals laid out by the NAS Decadal Survey (DS) report. Use of theory and/or numerical simulation is encouraged, while use of non-NASA data is allowed as long as those data are not the focus of the research.

HPD Program Managers wanted HPS to consider a proposal to combine the GI and SR calls in a single, open, annual competition. Dr. Kessel identified the following pros and cons to the merger:

- Pro – Review burden on community and NASA HQ would be reduced
- Pro – Use of NASA data is highlighted to community
- Con – Community has one less place to propose
- Con – Loss of flexibility in timing of submissions

Dr. Kessel emphasized that HPD has never been able to articulate a strong difference between the GI and SR programs. She presented a chart breaking out the types of data – NASA prime phase, NASA extended phase, NASA archive, and non-NASA – by two methods: data analysis and theory/modeling. Both GI and SR are involved in each of the resulting segments. Most proposals use both NASA data and theory/modeling.

Between 2005 and 2014, 700 GI and SR proposals were awarded, with the award amounts typically ranging from around $110,000 to almost $113,000. Awards went to 431 PIs, 60 percent of whom only won one award in the GI and SR areas over that time period. Another 25 percent won two awards, 10 percent won three, and about 5 percent won four or more. PIs who won two awards were likely to win one in each area, with the separation time most likely to be 4 years. The likelihood of a PI winning an award in a given year does not increase when the PI submits proposals to both GI and SR, and few PIs submit to both in the same year to begin with.

In her final slide, Dr. Kessel showed HPD staff and their science expertise.

Geospace Management Operations Working Group (G/MOWG) Finding

Dr. Doug Rowland, G/MOWG Chair, said that the Working Group was glad to see the effort to reduce redundancy. However, there is concern that the community will perceive this as a loss of funding opportunities. Therefore, the details will need to be communicated in order to provide clarity.

G/MOWG identified two additional issues. First, the reorganization creates a loss of funding flexibility, in that there are fewer times for researchers to apply. In addition, it seems that this might make the program more vulnerable to future budget cuts. A single program would be easier to eliminate or cut than two might be. It also seems a little backward to make the community adapt to the NASA staffing issues that appear to be driving this. The staffing issue needs to be resolved.

Solar-Heliosphere Management Operations Working Group (SH/MOWG) Finding

Dr. James Klimchuk explained that the SH/MOWG, of which he is chair, thought the two programs should not merge and identified strong reasons for keeping the programs separate. The overriding reason not to merge is that the grants program is incredibly important, but no one knows what constraints might exist in the future or who might be involved in decision-making. Second, SH/MOWG feels that the large majority of the grants programs should not be earmarked, but should be open ended instead, allowing the community to pursue the science that would have the most important results. There is an issue of program viability in terms of funding, as well; one program would be more vulnerable than would two. Last year, all GI funds went to two missions, which upset the community. The merged program is more likely to direct funds to specific missions, which SH/MOWG does not like.

Discussion

Dr. W. Jeffrey Hughes, filling in as HPS Chair, asked about the goal in merging SR and GI. Dr. Kessel replied that one issue is the difference in telling them apart. There is also overlap to other programs. Dr. Arik Posner of HPD pointed out that the data did not capture situations in which PIs serve as co-investigators (co-Is). When Dr. Hughes asked about having the two programs come in on a single submission date, Dr. Kessel explained that that was tried but did not work. There are many steps the community does not see in this process. Having more staff would help.

Dr. Spiro Antiochos said that he did not see how combining the two programs helps increase R&A funding, while it could decrease funding. He was also concerned that this could limit the GI program, which would weaken case for the Heliophysics System Observatory. There should be a dedicated program for analyzing those data. Eliminating the GI program would cause a loss of vitality in the field. He would be worried that this shows a retrenchment in the field rather than expansion. The fact that few PIs submit to both SR and GI indicates that the community understands the difference between them. Dr. Kessel explained that HPD still plans to have a GI call separate from the combined call when a mission launches.

Dr. Antiochos stated that there needs to be a data analysis program. Dr. Mihir Desai agreed, adding that there should be a broader program for guest investigators. Dr. Jill Dahlburg asked for the cost of managing the two programs, noting that it might make sense to combine them and shift the cost savings to grants. Dr. Michael Liemohn said that the same number of panelists would be required for review, resulting in only a slight savings. Dr. Hughes added that there is a lot of cost to the community as well. Dr. Posner explained that the management costs comprise about 3 percent of the program, and the overhead is paid for by the Science Mission Directorate (SMD). This does not include the cost of civil servants. Dr. Dahlburg said that if the costs stay about the same, and the community would react badly, it seems there is no benefit to the merger.

Dr. James Russell agreed with Dr. Antiochos, noting that even the perception of a shrinking program is bad. A combined program makes it harder to hold onto the funds. He felt that, especially since there is no money saved, they should keep it like it is. Dr. Liemohn thought that the bigger issue is that there has never been a good articulation of the differences between the two programs, which he thought HPS should address. Dr. Russell did not see duplication as that much of a concern, and suggested that HPD seek help from the NASA centers in alleviating the excessive workload associated with reviews.

In answer to a question, Dr. Posner explained that in the two-step proposal process, HPD does a compliance check, followed by an encourage/discourage response for the first phase. Some proposals are filtered out that way, but it is a small number and the trend is to ignore the discourage response. Dr. Kessel explained that more data will be necessary before the Division can analyze the extent to which discouraged applications result in winning proposals. The GI program had only one discouraged proposal come back as a Step 2; it did not win. SR has not yet had a full cycle of the two phases. Nor is HPD ready

to provide feedback to discouraged proposals, which would double the workload. It is also too early to determine whether the two-step process has saved costs. Dr. Kessel noted that in the GI program (Van Allen – BARREL element), about half were discouraged in Step 1, which is about right. The goal is to provide the Step 2 applicants with a one-in-three or -four shot at funding.

Dr. Hughes asked if it might help to make the two programs more distinct, thereby making it harder to apply to both. It might be possible to have GI clearly designated for particular high-priority science or missions, for example. He felt that the proposed merger would create a general research program. Dr. Liemohn said that in the absence of data, the merger would address a problem that might not exist. Merging would only make sense if there were a lot of overlap.

Dr. Posner pointed out that there are rules against accepting awards from multiple Federal agencies for the same project. The penalties are severe. HPD does not have the personnel to check that kind of thing. Dr. Liemohn asked if this was likely. He could see bad proposals being submitted repeatedly, but not good ones. Sometimes, a project will get funding for different elements from different sources.

Dr. Hughes said that he had the sense that HPS did not like the proposal. Dr. Dahlburg replied that if they could be told that a certain dollar amount would be saved, and that those funds would go to additional proposals, the Subcommittee might support it. Otherwise, it was not viable. Dr. Vassilis Angelopoulos said that it was not clear that there was excess to be found. He thought the status quo seemed efficient already. If only 10 percent of PIs propose to both programs, and the proposals are not similar, the merger did not seem to be worth doing. Dr. Liemohn thought that it would help to have HPD provide more distinct language that differentiated the two programs. Dr. Kessel said that HPD has been working on it for at least 3 years and is still not happy with the language. The program managers would appreciate HPS assistance. Dr. Hughes proposed that this be a topic at the spring HPS meeting.

Dr. Kessel noted that it might help to find out why investigators who submit to GI always do so. Despite NASA's efforts to explain what the Agency needs, inappropriate submissions still come in, and about half of those discouraged from Step 1 of the proposal process submit to Step 2 nonetheless. Dr. Antiochos suggested that, since the community is fighting for limited funds, they are taking longshots. Eventually, Step 1 will have to be binding. It was noted that HPD should encourage flexibility. Proposers sometimes have to guess where the competition is heaviest, and they end up narrowly defining themselves.

Dr. Jeffrey Newmark, HPD Director, said that the Division would consider making changes to the draft proposal, with the goal of moving forward in the next year, to reflect the sense of the HPS in better defining the SR and GI programs. He asked that HPS send him their findings. In the meantime, the Division would have two distinct programs during the coming year. Dr. Hughes promised to have something to Dr. Newmark soon. He then thanked the Subcommittee members and adjourned the meeting.

Appendix A
Attendees

Heliophysics Subcommittee members
Vassilis Angelopoulos, UCLA
Spiro Antiochos, NASA GSFC
Jill P. Dahlburg, Naval Research laboratory
Mihir Desai, Southwest Research Institute
W. Jeffrey Hughes, Acting Chair, Boston University
Michael W. Liemohn, University of Michigan
Neil Murphy, JPL
James Russell III, Hampton University
Ramona Kessel, NASA HQ, Executive Secretary

NASA Attendees
Louis Barbier
Guan Le
Bob Leamon
Jeff Morrill
Jeffrey Newmark, HPD Director
William Paterson
Arik Posner
Jenny Rumburg
Sandra Smalley
Elsayed Talaat

Other Attendees
Elizabeth Sheley, Zantech IT

Appendix B
Subcommittee Membership

Maura Hagan (Chair)
National Center for Atmospheric Research
Boulder, CO

Ramona Kessel (Executive Secretary)
NASA HQ

Vassilis Angelopoulos
UCLA

Spiro Antiochos
NASA GSFC

Jill P. Dahlburg
Naval Research laboratory

Mihir I. Desai
Science and Engineering Division
Southwest Research Institute

W. Jeffrey Hughes
Astronomy Department
Boston University

Michael W. Liemohn
University of Michigan

Ralph L. McNutt, Jr.
Johns Hopkins University

Neil Murphy
JPL

James Russell III
Hampton University

William Kent Tobiska
Space Environment Technologies

Appendix C
Presentations

1. ROSES 2015: Combine GI and SR?

Appendix D
Agenda

Heliophysics Subcommittee Meeting
January 9, 2015

Friday January 9; 6H41

1:30 Subcommittee Room Open	
2:00 Welcome	Maura Hagan, HPS Chair
2:10 ROSES 2015: Combine SR/GI Programs	Mona Kessel, HPS Exec Sec.
2:30 G/MOWG finding	Doug Rowland, G/MOWG Chair
2:45 SH/MOWG finding	Jim Klimchuk, SH/MOWG Chair
3:00 Discussion	All
4:00 ADJOURN	